

Claims

- [c1] 1. A brush seal adapted to restrict a fluid flow through a gap between a first component and a second component, comprising:
- a body;
 - a brush pack secured to said body; and
 - a passageway through said body for introducing a cooling flow to said gap, said passageway having a first end that is exposed to said gap and a second end that is not exposed to said gap.
- [c2] 2. The brush seal of claim 1, wherein said body comprises a side plate and a backing plate, and said passageway extends through said side plate.
- [c3] 3. The brush seal of claim 2, wherein said side plate includes a windage cover, said passageway extending through said windage cover.
- [c4] 4. The brush seal of claim 1, wherein said first end is adjacent said brush pack.
- [c5] 5. The brush seal of claim 1, wherein said passageway comprises a plurality of passageways.
- [c6] 6. The brush seal of claim 1, in combination with said first component, wherein said first component also has a passageway therethrough in communication with said second end of said passageway of said brush seal.
- [c7] 7. The combination of claim 6, wherein said first component comprises a stationary component.
- [c8] 8. The combination of claim 7, wherein said first component comprises a stationary component of a gas turbine engine.
- [c9] 9. An apparatus, comprising:
- a first component;
 - a second component;
 - a brush seal mounted on said first component and contacting said second component, wherein said brush seal inhibits a fluid flow from passing between said first component and said second component; and

an opening for discharging a cooling flow to said brush seal, said cooling flow discrete from said fluid flow.

- [c10] 10. The apparatus of claim 9, wherein the apparatus is a gas turbine engine.
- [c11] 11. The apparatus of claim 10, wherein another component of said gas turbine engine supplies said cooling flow to said opening.
- [c12] 12. The apparatus of claim 11, wherein said another component comprises a compressor.
- [c13] 13. The apparatus of claim 9, wherein said second component includes said opening.
- [c14] 14. The apparatus of claim 13, wherein said second component is a rotating component.
- [c15] 15. The apparatus of claim 9, wherein said first component includes said opening.
- [c16] 16. The apparatus of claim 15, wherein said first component is a stationary component.
- [c17] 17. The apparatus of claim 9, wherein said cooling flow has a temperature lower than said fluid flow.
- [c18] 18. A method of cooling a brush seal, comprising the steps of:
 - providing a brush seal, first component and second component;
 - placing said brush seal between said first component and said second component to inhibit a fluid flow from passing therebetween; and
 - supplying a cooling flow to said brush seal.
- [c19] 19. The method of claim 18, wherein said cooling flow passes through said first component.
- [c20] 20. The method of claim 19, wherein said first component is a stationary component.
- [c21] 21. The method of claim 18, wherein said cooling flow passes through said

second component.

[c22] 22. The method of claim 21, wherein said second component is a rotating component.

[c23] 23. The method of claim 18, wherein said cooling flow has a lower temperature than said fluid flow.

[c24] 24. The method of claim 18, wherein said cooling flow is discrete from said fluid flow before said supplying step.

[c25] 25. The method of claim 18, wherein said brush seal includes a brush pack and said supplying step supplies said cooling flow to said brush pack.